

UNITED STATES  
DEPARTMENT OF LABOR  
MINE SAFETY AND HEALTH ADMINISTRATION

District 7

Accident Investigation Report  
(Underground Coal Mine)

NONFATAL COAL OUTBURST ACCIDENT

No. 37 Mine (I.D. No. 15-04670)  
Arch of Kentucky, Incorporated  
Cumberland, Harlan County, Kentucky

April 12, 1989

by

James W. Poynter  
Coal Mine Safety and Health Inspector

Originating Office - Mine Safety and Health Administration  
HC 66 Box 1762, Barbourville, Kentucky 40906  
Joseph J. Garcia, District Manager

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## Abstract of Investigation

U.S. Department of Labor  
Mine Safety and Health Administration

**Authority**—This report is based on an investigation made pursuant to the Federal Mine Safety and Health Act of 1977, Public Law 95-173, as amended by Public Law 95-164.

## Section A—Identification Data

1. Title of investigation: Nonfatal Coal Outburst Accident  
 2. Date MSHA investigation started: 04-13-89  
 3. Report release date: \_\_\_\_\_  
 4. Mine: No. 37  
 5. Mine ID number: 15-04670  
 6. Company: Arch of Kentucky, Inc.  
 7. Town, County, State: Cumberland, Harlan County, Kentucky  
 8. Author(s): James W. Poynter

## Section B—Mine Information

9. Daily production: 10,000  
 10. Surface employment: 47  
 11. Underground employment: 235  
 12. Name of coalbed: Harlan  
 13. Thickness of coalbed: 84-inches

## Section C—Last Quarter Injury Frequency Rate (HSAC) for:

14. Industry: Total Deg. 2-5: 12.78  
 15. This operation: 6.98  
 16. Training program approved: 05-17-88  
 17. Mine Profile Rating: N/A

## Section D—Originating Office

18. Mine Safety and Health Administration  
 Coal Mine Health and Safety District No.: 07 HC 66, P.O. Box 1762, Barbourville, Kentucky, 40906  
 Address: \_\_\_\_\_

## Section E—Abstract

A coal outburst occurred at 11:24 am, Wednesday, April 12, 1989, on the 004-0 (Longwall) section. The longwall shearer was making the cut-out with the shearer approximately 15-feet from the tailgate entry, when the outburst occurred.

Two (2) persons, James Talbott, head-gate side shearer operator, and Larry Cornett, propman, received injuries from the outburst. The injured persons were checked for visible injuries by Don Hendrickson, section foreman, and Dennis Pennington, mechanic, and transported via company ambulance to the Lynch Clinic.

## Section F—Mine Organization

Company officials:	Name	Address
19. President:	Tom J. Sawarynski	P.O. Box 787, Lynch, Kentucky, 40
20. Superintendent:	Danny L. Stickel	P.O. Box 787, Lynch, Kentucky, 40
21. Safety Director:	Kenneth R. McCoy	P.O. Box 787, Lynch, Kentucky, 40
Principle officer—H&S:	Danny L. Stickel	P.O. Box 787, Lynch, Kentucky, 40
23. Labor Organization:	U.M.W.A., District 19, Local 7425	P.O. Box (B), Cumberland, KY, 40
24. Chairman—H&S Committee:	Bob Clay	101 Huff Ave., Cumberland, KY, 40

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## General Information

The No. 37 Mine of Arch of Kentucky, Incorporated is located one mile south of U.S. 119 on Cloverlick Road, Cumberland, Harlan County, Kentucky. The mine began operation on or about October 1, 1980. The mine produces coal with four shifts per day, five days per week, with two-hundred-thirty-five underground employees and forty-seven surface employees.

The mine is a multi-unit mine with two advancing units and one longwall unit, in production at this time. The advancing units utilize three to five entry systems with Joy 12CM continuous miners, Joy 10SC shuttle cars, Fletcher or Galis roof bolters and S&S scoops. The longwall unit utilizes a Mitsui Trojan 700 shearer, one-hundred-four Westfalia shields, and a Halbach-Braun stage-loader automatic face conveyor system across a five-hundred foot working face. All units utilize belt conveyor coal haulage. Track haulage is used for mantrip and supply via battery and/or trolley or diesel-powered vehicles. The mine has a daily production of ten-thousand tons.

Arch of Kentucky, Incorporated officials are as follows:

Tom J. Sawarynski, President  
Danny Stickel, Superintendent No. 37 Mine  
Kenneth R. McCoy, Manager Safety and Employee Development

The Roof Control Plan, approved June 20, 1988, provides for full overhead support in all roof spans. The maximum entry width is twenty feet, developed with a minimum distance of sixty feet between the centers of entries, crosscuts and rooms. Rods, fully grouted with polyester resin are used on advancing sections. The minimum length of rods is thirty-six inches with installation on forty-eight inch centers. Tensioned rebar combination bolts, with twenty-four inches minimum grouting, are also approved for use. Tensioned rebar bolts have a minimum length of forty-eight inches, installed on forty-eight inch centers. The retreating longwall section provides for full overhead support utilizing four-leg hydraulically powered "shields" with one-hundred-fifty-four tons yield capacity per leg. Shields are equipped with extensible plates for skin-to-skin protection on the roof beam and caving shield and forepole extension to provide immediate support behind the shearer.

The last regular Health and Safety Inspection was completed March 31, 1989.

## Description of Accident

Wednesday, April 12, 1989, at 7:00 am, the 004 section crew of eight persons entered the mine by diesel mantrip and traveled to the working section. The section crew switched-out at the face with the previous crew and coal production began at approximately 8:05 am. The shearer was located at the No. 15 shield with the coal face being advanced toward the No. 1 shield at the headgate entry. This pass was completed and two more complete passes were made without incident.

Clark Williams and James Talbott (injured), Tailgate and Headgate-side Shearer Operators, respectively, were making the cut-out at the tailgate to complete the third pass when the outburst occurred. Williams was advancing the shearer at the No. 101 shield. Talbott (regular occupation propman) was reaching across the panline to the machine's controls to reposition the cowl at the No. 94 shield. Larry Cornett (injured) was located between the Nos. 88 and 89 shields, aligning the conveyor panline. Dennis Pennington, Mechanic, was working at the No. 80 shield and Don Hendrickson, Section Foreman, was making an air measurement at the No. 76 shield.

Hendrickson and Pennington proceeded to Cornett, who was knocked down and partially covered by material discharged from the outburst; Williams attended to Talbott, who was driven back between the legs of the shields. Hendrickson and Pennington checked Cornett for injuries and then checked Talbott. No visible injuries were found. The injured persons were transported to the surface and then to the Lynch Medical Services Clinic, Lynch, Kentucky, via the company ambulance. Talbott was treated for contusions and released. Cornett was treated for contusions and released to return to work April 14, 1989.

## Physical Factors Involved

The investigation revealed the following factors relevant to the occurrence of the accident:

1. The mine is located in the Harlan coal seam, one-half mile south of the city of Cumberland, Harlan County, Kentucky. The immediate roof, throughout the mine, normally consists of ten feet or more siltstone and the main roof consists of ten feet or more sandstone. Coal is extracted from the longwall face by a Mitsui Trojan 700 ripper-type shearer. The coal is transported across the five-hundred foot face by a Halbach-Braun (H&B) conveyor pan-line.
2. The longwall panel (total length approximately seven-thousand-five hundred feet) had been mined approximately one-thousand-five-hundred feet to where mining was ceased due to a sandstone roll at the No. 49 crosscut. The unit was moved to the No. 42 crosscut, a distance of approximately eight-hundred-forty feet, after new set-up entries were established.
3. The longwall unit had advanced approximately two-thousand four-hundred feet from the No. 42 crosscut to where the accident occurred.
4. The headgate and tailgate entries, for the affected panel, were developed as three-entry systems on one-hundred-twenty foot centers.
5. The total amount of overburden, in the area of the accident was approximately one-thousand-one-hundred-seventy-five feet.
6. The area of the accident was supported by Westfalia four-leg shields with one-hundred-fifty-four tons per leg yield capacity.
7. The immediate roof (sandstone), estimated to be forty to fifty feet thick, was not caved to within fifteen feet of the shields. No roof fracturing was observed along the coal face.
8. Approximately thirty-three tons of material was broken or expelled from the coal face, affecting an area approximately sixty feet long, seven feet high and two feet (average) in depth.
9. Mining was completed in November, 1988, in the adjacent area, between Nos. R-16 and R-22 entries.

### **Conclusion**

It was the consensus of the investigating committee the accident occurred because significant caving had not occurred inby the longwall unit to relieve the pressure across the working face created by massive consolidated sandstone roof.

### **Violation**

1. A 103-K Order was issued April 12, 1989, for the purpose of investigaion into the injury related accident.



**Respectively Submitted:**

**James W. Poynter**  
**Coal Mine Safety and Health Inspector**

**Approved by:**

**Carl E. Boone II**  
**Subdistrict Manager**

**and**

**Joseph J. Garcia**  
**District Manager**

## Preliminary Report of Accident

U.S. Department of Labor  
Mine Safety and Health Administration

This Form Is Affected by the Privacy Act of 1974.

1. Accident Type <b>Non-fatal Injury Accident</b>		2. Accident Classification <b>Fall of Face, Rib, Side or Highwall</b>		3. Fatal Case Number	
4. District <b>07</b>		5. Subdistrict <b>Barbourville</b>		6. Field Office <b>Harlan</b>	
7. Name of Person Preparing Report <b>James W. Poynter</b>		8. MSHA Person Notified <b>Roger Pace</b>		Date <b>04-12-89</b>	Time <b>12:05 pm</b>
9. Notifying Mine Person <b>J. R. Estep</b>		10. Telephone Number <b>606-589-2986</b>			
11. Mining Company Name <b>Arch of Kentucky, Inc.</b>		a. Company/Contractor Name <b>N/A</b>		b. Parent Company <b>Arch Mineral Corporation</b>	
12. Mine Name <b>No. 37</b>		a. Union <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		13. ID Number <b>15-04670</b>	
15. Number of Employees: a. Total <b>282</b> b. Underground <b>235</b>		c. Open Pit or Quarry <b>N/A</b>		d. Mill/Prep Plant <b>N/A</b>	
16. Number of Persons in Mine at Time of Accident <b>49</b>		e. Number of Persons Unaccounted for <b>0</b>		14. Primary Mineral Mined <b>Coal</b>	
17. Mine Location: a. City <b>Cumberland</b>		b. County <b>Harlan</b>		c. State <b>Kentucky</b>	
18. Date of Accident (month, day & year) <b>04-12-89</b>		19. Time of Accident (Indicate a.m./p.m.) <b>11:24 am</b>		20. Date/Time of Death (month, day & year) <b>N/A</b>	
21. Mark code which best describes where accident occurred.					22. Mining Height <b>84-inches</b>
<input checked="" type="checkbox"/> 01 - Underground <input type="checkbox"/> 02 - Surface at Underground <input type="checkbox"/> 03 - Open Pit Mine <input type="checkbox"/> 06 - Dredge Mining <input type="checkbox"/> 07 - Advance Mining <input type="checkbox"/> 08 - Retreat Mining <input type="checkbox"/> 30 - Mill/Prep Plant <input type="checkbox"/> 99 - Office Facility <input type="checkbox"/> Other (specify)					
23. Number of Nonfatal Injuries <b>02</b>		24. Number of Fatal Injuries or Illnesses (complete additional sheets for multiple fatalities) <b>N/A</b>		a. Name	
b. Age	c. SSN (last 4 digits)	d. Regular Job Title		e. Job Title When Injured (if different)	
Mining Experience:		a. Total	b. With Company	c. At Mine	d. On Job
26. Autopsy		<input type="checkbox"/> Yes <input type="checkbox"/> No		a. Place	

27. Description of accident, include equipment involved, exact location in mine of fatality, and status of rescue and recovery operations, if appropriate. (continue on reverse if more space needed)

At 11:24 am, April 12, 1989, along the Longwall face, beginning at the No. 80 shield and extending to the No. 102 shield, an outburst of coal occurred, resulting in injuries to two (2) persons and damaging the longwall shearer machine and face conveyor.

Exact location in the mine was on the 004-0 m.m.u. (Longwall section) located in the longwall panel between the No. R-9 and R-16 entries. The longwall face is approximately 500 feet long. The distance from the portal to the longwall section is approximately 25,500 feet.

(continued on reverse ☐)

28. Equipment Manufacturer <b>Mitsui</b>		29. Model <b>Trojan 700</b>	
7. Initial Report <input checked="" type="checkbox"/>	31. Signature <i>James W. Poynter</i>	Title <b>Coal Mine Inspector</b>	Date <b>04-13-89</b>
32. Reason for Amendment:			

## Data Sheet

U.S. Department of Labor  
Mine Safety and Health Administration

## Section A—Victim Data

1. Name

Larry Cornett

2. Sex

☒ Male☐ Female

3. Social Security Number

406-78-3800

4. Age

35

5. Job Classification

Propman

6. Experience at this Classification

6 yrs

7. Total Mining Experience

12 yrs 6 mo

8. What activity was being performed at time of accident?

Propman - Pushing over face conveyor

9. Victim's Experience at this Activity

6 yrs

10. Was victim trained in this task?

yes

## Section B—Victim Data for Health and Safety Courses/Training Received (related to accident)

11.

Date Received

Annual Retraining

October 21, 1988

12.

Safety Contacts &amp; Observations on Task

Daily  
Weekly

13.

Training &amp; Job Assignment

14.

## Section C—Supervisor Data (supervisor of victim)

15. Name

Don Hendrickson

16. Certified

☒ Yes☐ No

17. Experience as Supervisor

Approximately 10 years

18. Total Mining Experience

17 years

## Section D—Supervisor Data for Health and Safety Courses/Training Received (related to accident)

19.

Date Received

Annual Retraining

October 14, 1988

20.

Electrical Retraining

October 22, 1988

21.

Mine Rescue

Monthly

22.

23. When was the supervisor last present at accident scene prior to the accident?

Approximately 11:20 a.m.

24. What did he do when he was there?

Normal Procedures

25. When was he last in contact with the victim?

26. Did he issue instructions relative to the accident?

None

None

27. Was he aware of or did he express an awareness of any unsafe practice or condition?

No

## Data Sheet

U.S. Department of Labor  
Mine Safety and Health Administration

## Section A—Victim Data

1. Name

James Talbott

2. Sex



Male

☐ Female

3. Social Security Number

229-72-4263

4. Age

37

5. Job Classification

Propman

6. Experience at this Classification

2 yrs.

7. Total Mining Experience

18 yrs.

8. What activity was being performed at time of accident?

Cutting Bottom

9. Victim's Experience at this Activity

1 year

10. Was victim trained in this task?

Qualified Yes

## Section B—Victim Data for Health and Safety Courses/Training Received (related to accident)

11.

Date Received

Annual Retraining October 14, 1988

October 14, 1988

12.

Safety Contact &amp; Observation on Task Training

Daily  
Weekly

13.

Job Assignment Recorded Weekly

14.

## Section C—Supervisor Data (supervisor of victim)

15. Name

Donald Hendrickson

16. Certified

Yes ☐ No

17. Experience as Supervisor

Approximately 19 years

18. Total Mining Experience

17 years

## Section D—Supervisor Data for Health and Safety Courses/Training Received (related to accident)

19.

Date Received

Annual Retraining

October 14, 1988

20.

Electrical Retraining

October 22, 1988

21.

Mine Rescue Team Member

Monthly

22.

23. When was the supervisor last present at accident scene prior to the accident?

Approximately 11:10 a.m.

24. What did he do when he was there?

Normal Procedures

25. When was he last in contact with the victim?

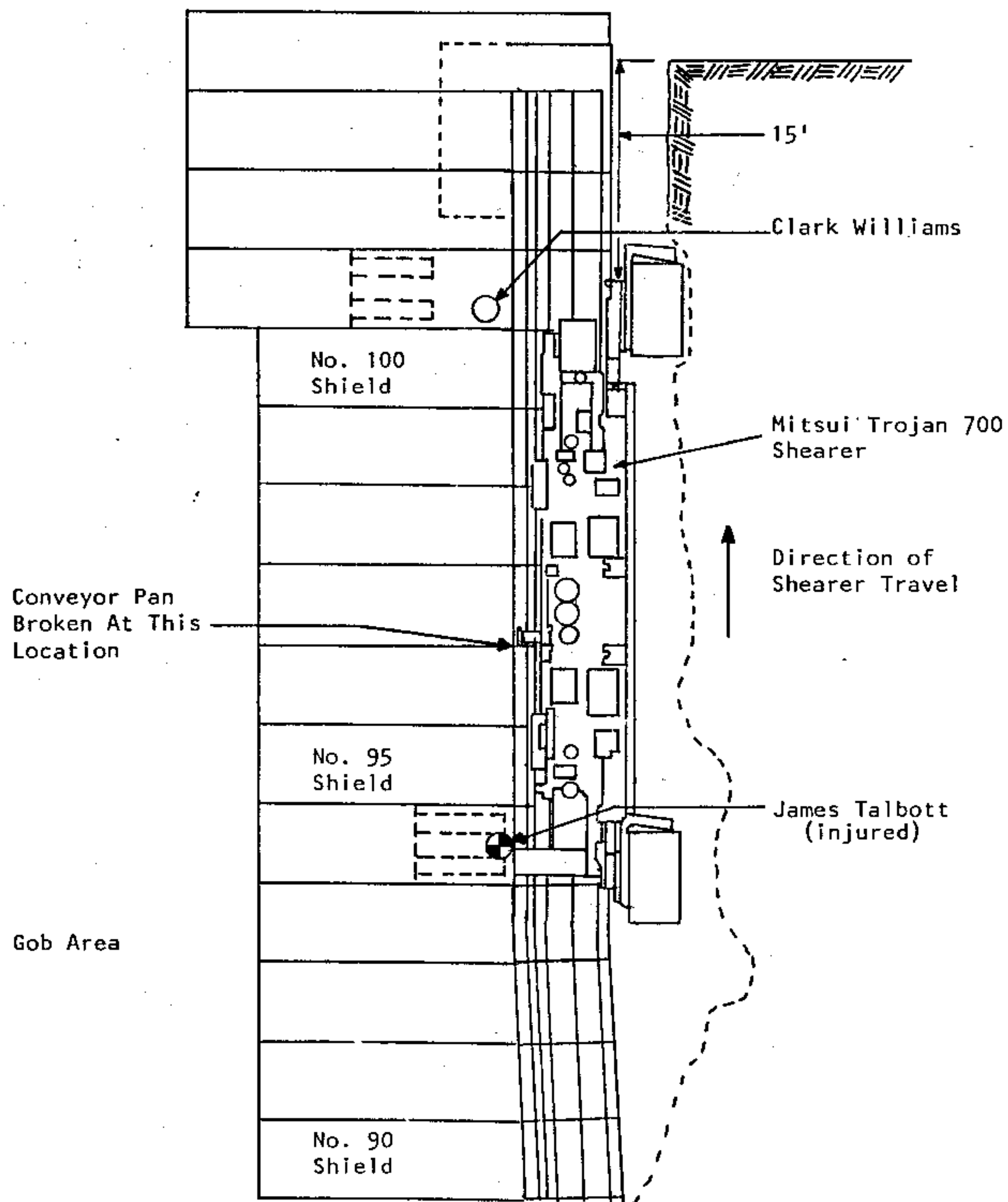
None

26. Did he issue instructions relative to the accident?

None

27. Was he aware of or did he express an awareness of any unsafe practice or condition?

No

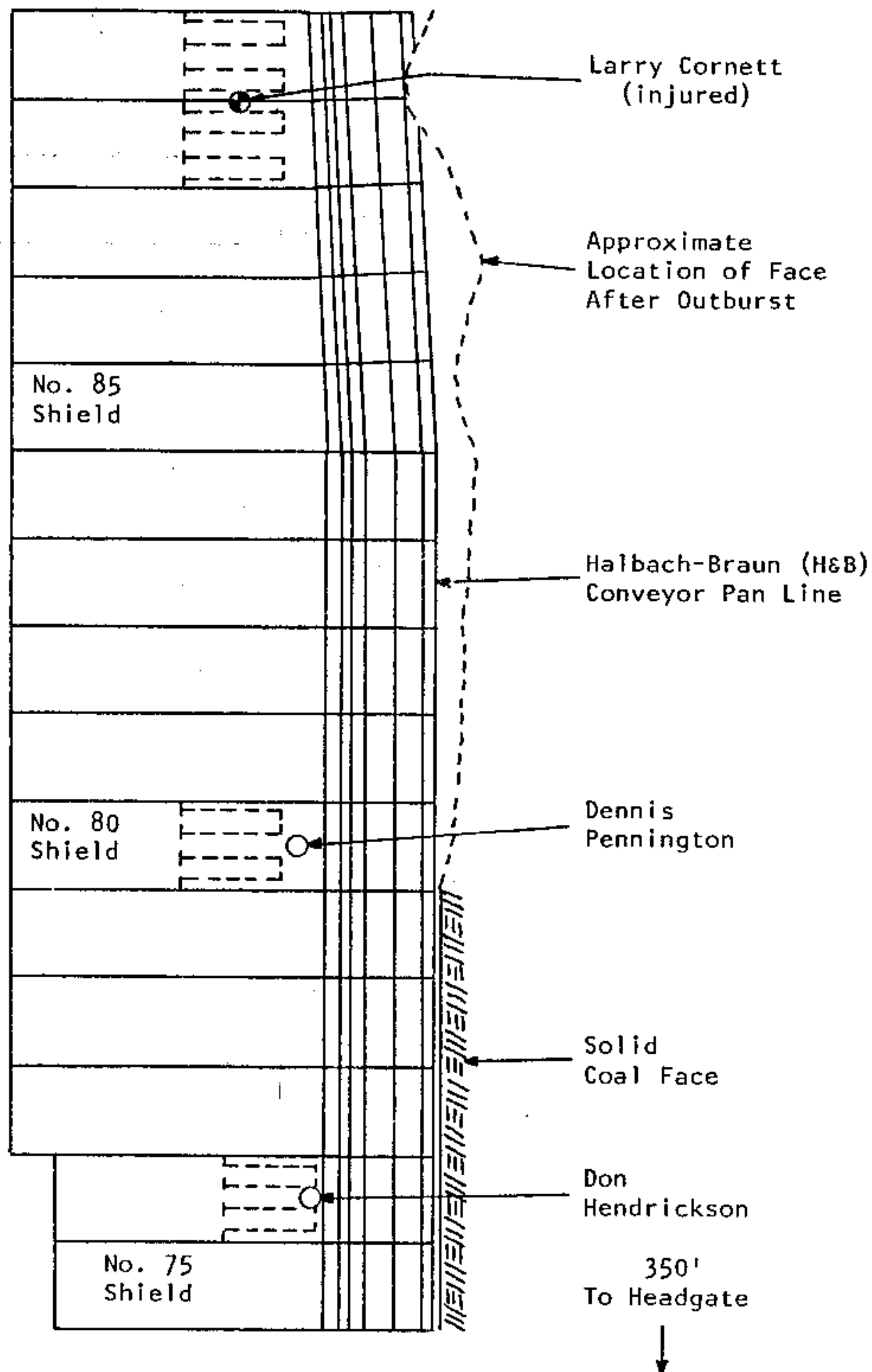


Sketch Number 2

NONFATAL COAL OUTBURST ACCIDENT  
 NO. 37 MINE (I.D. NO. 15-04670)  
 ARCH OF KENTUCKY, INC.  
 CUMBERLAND, HARLAN COUNTY, KENTUCKY  
 APRIL 12, 1989

Scale: 1" = 10'

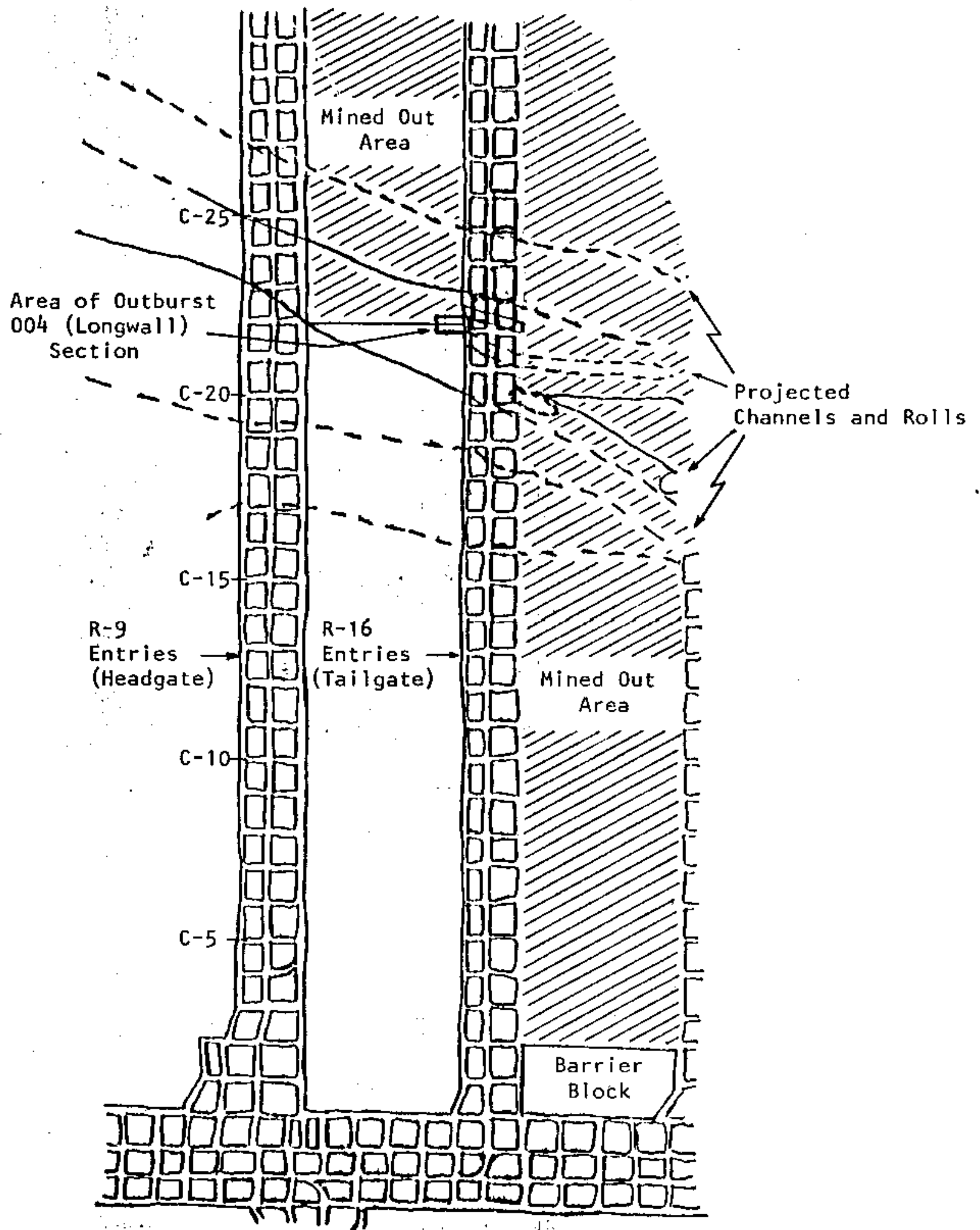
Gob Area



Sketch Number 3

NONFATAL COAL OUTBURST ACCIDENT  
NO. 37 MINE (I.D. NO. 15-04670)  
ARCH OF KENTUCKY, INC.  
CUMBERLAND, HARLAN COUNTY, KENTUCKY  
APRIL 12, 1989

Scale: 1" = 10'



Sketch Number 4

NONFATAL COAL OUTBURST ACCIDENT  
 NO. 37 MINE (I.D. NO. 15-04670)  
 ARCH OF KENTUCKY, INC.  
 CUMBERLAND, HARLAN COUNTY, KENTUCKY  
 APRIL 12, 1989

Scale: 1" = 500'

